

Table 6.1  
Cancer of the Colon and Rectum (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints, 1992-2008 With up to Three Joinpoints,  
Both Sexes by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<u>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-85	0.8*	1985-95	-1.8*	1995-98	1.5	1998-08	-2.4*					-2.4*	-2.4*
White	1975-85	0.8*	1985-95	-2.0*	1995-98	1.7	1998-08	-2.6*					-2.6*	-2.6*
Black	1975-80	3.2*	1980-02	-0.1	2002-08	-2.3*							-1.5*	-2.3*
<u>SEER 13 Delay-Adjusted Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-2.1*	1995-98	1.7	1998-08	-2.3*							-2.3*	-2.3*
White	1992-95	-2.2*	1995-98	1.9	1998-06	-2.6*	2006-08	-1.6					-2.4*	-2.1*
Black	1992-03	-0.1	2003-08	-2.5*									-1.4*	-2.5*
<u>SEER 9 Observed Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-85	0.8*	1985-95	-1.8*	1995-98	1.6	1998-08	-2.5*					-2.5*	-2.5*
White	1975-85	0.8*	1985-95	-2.0*	1995-98	1.7	1998-08	-2.7*					-2.7*	-2.7*
Black	1975-80	3.2*	1980-02	-0.1	2002-08	-2.5*							-1.7*	-2.5*
<u>SEER 13 Observed Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-2.1*	1995-98	1.7	1998-08	-2.4*							-2.4*	-2.4*
White	1992-95	-2.2*	1995-98	1.8	1998-08	-2.6*							-2.6*	-2.6*
White NH <sup>ef</sup>	1992-95	-2.2*	1995-98	1.9	1998-08	-2.5*							-2.5*	-2.5*
Black	1992-03	-0.1	2003-08	-2.7*									-1.6*	-2.7*
Black NH <sup>ef</sup>	1992-03	-0.1	2003-08	-2.6*									-1.5*	-2.6*
API <sup>e</sup>	1992-08	-1.1*											-1.1*	-1.1*
AI/AN <sup>eg</sup>	1992-08	-0.5											-0.5	-0.5
Hispanic <sup>f</sup>	1992-99	0.8	1999-08	-1.9*									-1.9*	-1.9*
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2008</u>														
All Races														
White														
Black														
<u>U.S. Cancer Mortality<sup>c</sup>, 1992-2008</u>														
All Races														
White														
White NH <sup>ef</sup>														
Black														
Black NH <sup>ef</sup>														
API <sup>e</sup>														
AI/AN <sup>eg</sup>														
Hispanic <sup>f</sup>														

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry).

Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

API - Asian/Pacific Islander, AI/AN - American Indian/Alaska Native, NH - Non-Hispanic

Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska

Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

The Hispanic and Non-Hispanic mortality trends exclude deaths from CT, DC, ME, MD, MN, NH, NY, ND, OK and VT.

Data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

\* The APC/AAPC is significantly different from zero ( $p < .05$ ).

- Joinpoint regression line analysis could not be performed on data series.

Table 6.2  
Cancer of the Colon and Rectum (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints, 1992-2008 With up to Three Joinpoints,  
Males by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<u>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-85	1.1*	1985-91	-1.2*	1991-95	-3.2*	1995-98	2.0	1998-08	-2.9*			-2.9*	-2.9*
White	1975-85	1.1*	1985-91	-1.4*	1991-95	-3.3*	1995-98	2.1	1998-08	-3.0*			-3.0*	-3.0*
Black	1975-89	1.4*	1989-08	-0.8*									-0.8*	-0.8*
<u>SEER 13 Delay-Adjusted Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-2.6*	1995-98	1.5	1998-08	-2.6*							-2.6*	-2.6*
White	1992-95	-2.8*	1995-98	1.6	1998-08	-2.9*							-2.9*	-2.9*
Black	1992-08	-0.8*											-0.8*	-0.8*
<u>SEER 9 Observed Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-85	1.1*	1985-91	-1.2*	1991-95	-3.2*	1995-98	2.1	1998-08	-2.9*			-2.9*	-2.9*
White	1975-85	1.1*	1985-91	-1.4*	1991-95	-3.3*	1995-98	2.1	1998-08	-3.1*			-3.1*	-3.1*
Black	1975-91	1.2*	1991-08	-1.0*									-1.0*	-1.0*
<u>SEER 13 Observed Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-2.6*	1995-98	1.5	1998-08	-2.7*							-2.7*	-2.7*
White	1992-95	-2.8*	1995-98	1.6	1998-08	-3.0*							-3.0*	-3.0*
White NH <sup>ef</sup>	1992-95	-2.9*	1995-98	1.6	1998-08	-2.9*							-2.9*	-2.9*
Black	1992-08	-0.9*											-0.9*	-0.9*
Black NH <sup>ef</sup>	1992-08	-0.9*											-0.9*	-0.9*
API <sup>e</sup>	1992-01	-0.3	2001-08	-2.7*									-2.2*	-2.7*
AI/AN <sup>eg</sup>	1992-08	-1.1											-1.1	-1.1
Hispanic <sup>f</sup>	1992-98	1.5	1998-08	-2.4*									-2.4*	-2.4*
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2008</u>														
All Races														
White														
Black														
<u>U.S. Cancer Mortality<sup>c</sup>, 1992-2008</u>														
All Races														
White														
White NH <sup>ef</sup>														
Black														
Black NH <sup>ef</sup>														
API <sup>e</sup>														
AI/AN <sup>eg</sup>														
Hispanic <sup>f</sup>														

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry).

Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

API - Asian/Pacific Islander, AI/AN - American Indian/Alaska Native, NH - Non-Hispanic

Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska

Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

The Hispanic and Non-Hispanic mortality trends exclude deaths from CT, DC, ME, MD, MN, NH, NY, ND, OK and VT.

Data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

\* The APC/AAPC is significantly different from zero ( $p < .05$ ).

- Joinpoint regression line analysis could not be performed on data series.

Table 6.3  
Cancer of the Colon and Rectum (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints, 1992-2008 With up to Three Joinpoints,  
Females by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<u>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-85	0.3	1985-95	-1.9*	1995-98	1.9	1998-08	-2.1*					-2.1*	-2.1*
White	1975-85	0.3	1985-95	-2.0*	1995-98	2.1	1998-08	-2.3*					-2.3*	-2.3*
Black	1975-02	0.0	2002-08	-2.4*									-1.6*	-2.4*
<u>SEER 13 Delay-Adjusted Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-1.8*	1995-98	1.9	1998-08	-2.0*							-2.0*	-2.0*
White	1992-95	-1.7	1995-98	1.8	1998-08	-2.2*							-2.2*	-2.2*
Black	1992-00	0.5	2000-08	-1.7*									-1.4*	-1.7*
<u>SEER 9 Observed Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-85	0.3	1985-95	-1.9*	1995-98	1.9	1998-08	-2.2*					-2.2*	-2.2*
White	1975-85	0.3	1985-95	-2.1*	1995-98	2.1	1998-08	-2.4*					-2.4*	-2.4*
Black	1975-02	0.0	2002-08	-2.6*									-1.8*	-2.6*
<u>SEER 13 Observed Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-1.9*	1995-98	1.9	1998-08	-2.1*							-2.1*	-2.1*
White	1992-95	-1.7	1995-98	1.8	1998-08	-2.3*							-2.3*	-2.3*
White NH <sup>ef</sup>	1992-95	-1.7	1995-98	2.0	1998-08	-2.3*							-2.3*	-2.3*
Black	1992-00	0.5	2000-08	-1.9*									-1.6*	-1.9*
Black NH <sup>ef</sup>	1992-00	0.5	2000-08	-1.8*									-1.5*	-1.8*
API <sup>e</sup>	1992-08	-0.8*											-0.8*	-0.8*
AI/AN <sup>eg</sup>	1992-08	0.0											0.0	0.0
Hispanic <sup>f</sup>	1992-08	-0.7*											-0.7*	-0.7*
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2008</u>														
All Races														
White														
Black														
<u>U.S. Cancer Mortality<sup>c</sup>, 1992-2008</u>														
All Races														
White														
White NH <sup>ef</sup>														
Black														
Black NH <sup>ef</sup>														
API <sup>e</sup>														
AI/AN <sup>eg</sup>														
Hispanic <sup>f</sup>														

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry).

Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

API - Asian/Pacific Islander, AI/AN - American Indian/Alaska Native, NH - Non-Hispanic

Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska

Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

The Hispanic and Non-Hispanic mortality trends exclude deaths from CT, DC, ME, MD, MN, NH, NY, ND, OK and VT.

Data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

\* The APC/AAPC is significantly different from zero ( $p < .05$ ).

- Joinpoint regression line analysis could not be performed on data series.

Table 6.4  
Cancer of the Colon (Invasive) and Cancer of the Rectum (Invasive)

Trends in SEER 9 Observed Incidence<sup>a</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints,  
By Race and Sex

		JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC <sup>d</sup>
		Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2004-08
<u>SEER 9 Observed Incidence<sup>a</sup> for Cancer of the Colon, 1975-2008</u>														
All Races	Both Sexes	1975-85	1.1*	1985-95	-1.6*	1995-00	0.0	2000-08	-2.9*					-2.9*
All Races	Male	1975-85	1.7*	1985-02	-1.5*	2002-08	-3.6*							-3.6*
All Races	Female	1975-85	0.6*	1985-93	-1.8*	1993-01	-0.3	2001-08	-2.8*					-2.8*
White	Both Sexes	1975-85	1.1*	1985-95	-1.9*	1995-98	1.4	1998-08	-2.6*					-2.6*
White	Male	1975-86	1.6*	1986-95	-2.2*	1995-98	1.1	1998-08	-3.1*					-3.1*
White	Female	1975-85	0.6*	1985-93	-2.1*	1993-00	0.0	2000-08	-2.6*					-2.6*
Black	Both Sexes	1975-80	3.5*	1980-02	-0.1	2002-08	-3.2*							-3.2*
Black	Male	1975-87	1.8*	1987-03	-0.3	2003-08	-4.2*							-4.2*
Black	Female	1975-02	0.0	2002-08	-3.2*									-3.2*
<u>SEER 9 Observed Incidence<sup>a</sup> for Cancer of the Rectum, 1975-2008</u>														
All Races	Both Sexes	1975-87	-0.3	1987-95	-2.4*	1995-98	2.6	1998-08	-2.4*					-2.4*
All Races	Male	1975-89	-0.3	1989-94	-3.6*	1994-98	1.7	1998-08	-2.7*					-2.7*
All Races	Female	1975-84	-0.2	1984-95	-2.2*	1995-98	2.4	1998-08	-2.2*					-2.2*
White	Both Sexes	1975-85	-0.1	1985-95	-2.3*	1995-98	2.5	1998-08	-2.8*					-2.8*
White	Male	1975-89	-0.3	1989-94	-3.9*	1994-99	1.1	1999-08	-3.3*					-3.3*
White	Female	1975-84	-0.2	1984-95	-2.3*	1995-98	2.5	1998-08	-2.7*					-2.7*
Black	Both Sexes	1975-08	-0.1											-0.1
Black	Male	1975-08	0.0											0.0
Black	Female	1975-08	-0.2											-0.2

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.cancer.gov/joinpoint/>).  
 The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).  
 Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).  
 The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.  
 The APC/AAPC is significantly different from zero ( $p < .05$ ).  
 - Joinpoint regression line analysis could not be performed on data series.

a  
b  
\*  
-

Table 6.5  
Cancer of the Colon and Rectum (Invasive)

Delay-adjusted SEER Incidence<sup>a</sup> Rates by Year, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Year of Diagnosis:									
1975	59.51	68.43	53.64	60.17	69.75	54.02	56.85	59.33	54.66
1976	61.35	71.72	54.14	62.13	72.65	55.02	55.04	58.53	51.28
1977	62.41	73.49	54.96	63.20	74.32	55.78	60.69	75.66	51.47
1978	62.04	72.37	55.26	62.78	73.90	55.59	62.13	65.70	60.60
1979	62.37	74.11	54.58	62.96	75.20	54.95	58.57	61.64	56.29
1980	63.74	74.53	56.54	63.95	74.87	56.83	70.82	79.68	64.23
1981	64.24	75.83	56.47	64.87	76.70	57.14	62.76	72.77	55.94
1982	62.78	75.18	54.50	63.44	76.25	55.04	61.26	68.98	55.93
1983	63.67	75.60	55.61	64.28	76.60	56.06	66.75	75.69	61.15
1984	64.82	77.68	56.07	65.83	79.28	56.72	62.41	70.28	58.21
1985	66.30	79.16	57.33	67.22	80.21	58.39	63.89	74.15	56.29
1986	64.19	77.80	54.71	64.59	78.89	54.74	64.71	73.31	58.65
1987	62.71	77.49	52.66	62.90	78.24	52.61	66.25	77.53	59.05
1988	61.37	75.19	51.80	61.54	75.77	51.73	63.11	72.45	56.82
1989	61.70	74.96	52.43	61.98	75.45	52.69	64.48	79.35	54.72
1990	60.72	74.37	51.29	60.69	74.79	51.05	66.76	74.93	61.63
1991	59.50	72.91	50.07	59.34	73.14	49.72	65.68	76.39	58.24
1992	58.02	70.45	49.21	57.88	70.75	48.74	65.55	78.56	57.39
1993	56.83	68.46	48.34	56.38	68.15	47.84	64.53	78.07	55.34
1994	55.65	66.27	47.75	55.42	66.35	47.24	64.60	75.48	58.09
1995	54.07	63.85	46.96	53.76	63.47	46.66	61.99	71.26	56.07
1996	54.79	65.57	46.72	54.82	65.97	46.46	58.54	66.69	52.96
1997	56.47	68.18	47.98	56.50	68.05	48.13	64.54	77.52	56.14
1998	56.81	67.10	49.33	56.80	67.36	49.09	62.95	74.04	56.04
1999	55.54	65.79	47.91	55.40	65.96	47.31	63.35	72.01	58.31
2000	54.21	63.78	46.82	53.92	63.25	46.62	64.45	74.00	58.20
2001	53.57	62.93	46.26	53.00	62.55	45.44	64.31	74.80	57.60
2002	53.11	61.43	46.63	52.35	60.32	46.01	63.30	74.62	56.48
2003	50.71	59.40	43.85	50.24	58.61	43.48	62.22	75.25	54.20
2004	49.75	58.47	43.05	48.99	57.99	41.95	62.30	73.97	54.57
2005	47.52	54.90	41.68	47.18	54.87	40.97	57.62	64.56	53.83
2006	46.57	52.92	41.46	45.86	52.29	40.53	57.48	64.91	52.79
2007	45.96	52.74	40.45	45.11	51.67	39.73	57.71	66.55	51.58
2008	44.84	51.05	39.74	44.16	50.08	39.26	54.73	64.47	47.58

Additional information on the model used to delay-adjust SEER Incidence rates can be found at [\(http://surveillance.cancer.gov/delay/\)](http://surveillance.cancer.gov/delay/).

- <sup>a</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).  
 Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).  
 - Delay-adjusted rate is not shown for observed rates based on less than 16 cases for the time interval.

Table 6.6  
Cancer of the Colon and Rectum (Invasive)

Age-adjusted SEER Incidence<sup>a</sup> Rates by Year, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Year of Diagnosis:									
1975	59.51	68.43	53.64	60.17	69.75	54.02	56.85	59.33	54.66
1976	61.35	71.72	54.14	62.13	72.65	55.02	55.04	58.53	51.28
1977	62.41	73.49	54.96	63.20	74.32	55.78	60.69	75.66	51.47
1978	62.04	72.37	55.26	62.78	73.90	55.59	62.13	65.70	60.60
1979	62.37	74.11	54.58	62.96	75.20	54.95	58.57	61.64	56.29
1980	63.74	74.53	56.54	63.95	74.87	56.83	70.82	79.68	64.23
1981	64.24	75.83	56.47	64.87	76.70	57.14	62.76	72.77	55.94
1982	62.78	75.18	54.50	63.43	76.25	55.03	61.25	68.97	55.92
1983	63.67	75.59	55.60	64.28	76.59	56.05	66.74	75.67	61.14
1984	64.82	77.68	56.07	65.82	79.27	56.71	62.39	70.26	58.20
1985	66.29	79.15	57.33	67.21	80.20	58.38	63.87	74.12	56.27
1986	64.18	77.79	54.71	64.57	78.87	54.72	64.68	73.27	58.62
1987	62.70	77.48	52.65	62.88	78.21	52.59	66.21	77.48	59.01
1988	61.36	75.18	51.79	61.53	75.75	51.72	63.07	72.41	56.78
1989	61.68	74.94	52.42	61.95	75.41	52.66	64.41	79.28	54.67
1990	60.70	74.35	51.28	60.66	74.74	51.02	66.69	74.85	61.57
1991	59.48	72.89	50.05	59.30	73.09	49.68	65.59	76.29	58.16
1992	57.99	70.42	49.19	57.83	70.70	48.70	65.45	78.45	57.31
1993	56.80	68.43	48.32	56.33	68.09	47.80	64.42	77.94	55.25
1994	55.61	66.23	47.72	55.36	66.28	47.19	64.47	75.33	57.98
1995	54.02	63.80	46.92	53.69	63.39	46.60	61.85	71.10	55.95
1996	54.75	65.52	46.68	54.74	65.88	46.40	58.39	66.52	52.83
1997	56.41	68.11	47.93	56.41	67.93	48.05	64.35	77.29	55.97
1998	56.75	67.03	49.27	56.70	67.24	49.01	62.75	73.81	55.87
1999	55.46	65.69	47.84	55.27	65.80	47.19	63.09	71.71	58.06
2000	54.12	63.67	46.73	53.77	63.07	46.49	64.14	73.64	57.92
2001	53.46	62.80	46.16	52.82	62.34	45.29	63.95	74.39	57.28
2002	52.98	61.28	46.52	52.15	60.09	45.83	62.89	74.15	56.12
2003	50.57	59.23	43.73	50.01	58.34	43.28	61.76	74.69	53.80
2004	49.58	58.26	42.90	48.73	57.67	41.72	61.77	73.34	54.10
2005	47.32	54.68	41.51	46.88	54.52	40.71	57.04	63.92	53.30
2006	46.34	52.66	41.26	45.51	51.90	40.22	56.81	64.15	52.18
2007	45.69	52.43	40.21	44.70	51.21	39.38	56.92	65.64	50.88
2008	44.26	50.39	39.22	43.39	49.21	38.58	53.38	62.88	46.41
1975-2008	56.54	66.80	49.04	56.66	67.09	49.05	61.94	71.59	55.63

<sup>a</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).  
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).  
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.7  
Cancer of the Colon (Invasive)

Age-adjusted SEER Incidence<sup>a</sup> Rates by Year, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Year of Diagnosis:									
1975	41.34	45.39	38.89	41.72	46.13	39.13	42.83	44.14	41.64
1976	43.05	47.74	39.95	43.44	48.17	40.39	43.08	43.60	41.91
1977	43.97	49.55	40.36	44.66	50.06	41.19	45.39	58.33	37.66
1978	43.85	49.12	40.59	44.11	49.87	40.62	47.74	48.81	47.84
1979	43.77	50.20	39.62	44.11	51.03	39.72	44.68	45.58	43.97
1980	45.57	50.67	42.34	45.58	50.88	42.33	55.17	58.32	52.85
1981	45.47	51.34	41.71	45.88	51.94	42.12	46.85	50.60	44.36
1982	45.75	53.44	40.67	46.07	54.09	40.84	48.27	52.48	45.19
1983	46.11	53.04	41.63	46.42	53.50	41.87	50.20	58.52	45.25
1984	46.51	54.61	41.31	47.03	55.57	41.57	48.68	54.02	46.05
1985	47.88	55.03	42.96	48.42	55.62	43.65	49.87	57.34	44.21
1986	46.79	54.36	41.58	47.05	55.15	41.51	49.36	55.41	45.46
1987	45.23	54.43	39.15	45.14	54.52	39.06	51.35	59.84	45.73
1988	44.30	52.59	38.66	44.26	52.85	38.41	48.86	54.02	45.48
1989	44.36	52.42	38.96	44.47	52.48	39.19	48.89	60.28	41.62
1990	44.19	51.98	38.92	44.05	51.99	38.73	52.08	57.83	48.56
1991	43.60	51.84	37.91	43.31	51.86	37.42	51.74	57.75	47.67
1992	42.29	49.66	37.21	42.05	49.77	36.70	50.83	60.31	45.17
1993	41.60	48.95	36.32	41.07	48.64	35.66	51.15	60.52	45.02
1994	40.83	46.91	36.34	40.62	47.01	35.84	50.11	57.03	46.30
1995	39.65	45.04	35.86	39.30	44.66	35.48	48.74	54.79	45.42
1996	39.36	45.36	34.87	39.30	45.79	34.43	44.57	48.40	42.04
1997	41.11	48.43	35.96	41.12	48.30	36.15	49.16	58.98	42.55
1998	41.04	46.83	37.02	40.95	47.12	36.59	47.48	54.41	43.80
1999	39.80	45.42	35.68	39.58	45.42	35.14	48.45	54.70	44.93
2000	39.36	44.44	35.46	38.98	43.92	35.16	50.90	57.26	46.92
2001	39.15	43.96	35.47	38.73	43.68	34.86	48.82	55.54	44.63
2002	38.57	43.14	35.04	37.83	42.08	34.46	49.43	57.22	44.71
2003	36.79	41.26	33.23	36.40	40.53	33.01	47.22	56.45	41.67
2004	36.12	41.19	32.34	35.55	40.87	31.51	47.09	54.38	42.35
2005	34.13	37.62	31.42	33.86	37.68	30.81	43.67	48.33	41.51
2006	33.56	36.91	30.86	33.00	36.42	30.17	43.96	48.72	40.89
2007	32.58	35.63	30.19	32.14	35.20	29.76	42.05	46.70	38.72
2008	31.99	35.12	29.44	31.63	34.66	29.15	39.52	44.99	35.52
1975-2008	40.80	46.49	36.74	40.82	46.65	36.67	47.64	53.92	43.69

<sup>a</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).  
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).  
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.8  
Cancer of the Rectum (Invasive)

Age-adjusted SEER Incidence<sup>a</sup> Rates by Year, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Year of Diagnosis:									
1975	18.18	23.04	14.75	18.45	23.62	14.89	14.02	15.19	13.01
1976	18.30	23.97	14.19	18.70	24.48	14.63	11.96	14.93	9.37
1977	18.44	23.95	14.60	18.54	24.26	14.59	15.30	17.33	13.81
1978	18.19	23.25	14.66	18.67	24.03	14.97	14.39	16.89	12.76
1979	18.60	23.91	14.96	18.85	24.17	15.24	13.90	16.06	12.31
1980	18.18	23.86	14.20	18.36	23.99	14.51	15.65	21.36	11.38
1981	18.77	24.49	14.77	19.00	24.76	15.02	15.92	22.17	11.59
1982	17.02	21.74	13.83	17.36	22.15	14.19	12.98	16.49	10.73
1983	17.56	22.56	13.98	17.86	23.09	14.18	16.54	17.15	15.89
1984	18.30	23.07	14.76	18.79	23.70	15.15	13.71	16.24	12.15
1985	18.42	24.12	14.36	18.79	24.58	14.72	14.00	16.79	12.06
1986	17.39	23.43	13.13	17.52	23.73	13.21	15.32	17.86	13.15
1987	17.47	23.05	13.50	17.74	23.69	13.53	14.87	17.64	13.29
1988	17.06	22.59	13.13	17.27	22.90	13.31	14.21	18.38	11.30
1989	17.32	22.52	13.45	17.47	22.93	13.47	15.52	19.00	13.05
1990	16.51	22.37	12.36	16.61	22.75	12.29	14.61	17.02	13.01
1991	15.88	21.05	12.14	15.99	21.23	12.26	13.85	18.55	10.50
1992	15.71	20.76	11.98	15.78	20.92	11.99	14.62	18.14	12.14
1993	15.19	19.48	12.00	15.26	19.44	12.14	13.27	17.42	10.22
1994	14.78	19.32	11.38	14.74	19.27	11.35	14.36	18.30	11.68
1995	14.38	18.77	11.06	14.40	18.74	11.13	13.11	16.31	10.53
1996	15.39	20.15	11.81	15.44	20.09	11.96	13.82	18.12	10.79
1997	15.30	19.69	11.97	15.29	19.63	11.90	15.19	18.31	13.42
1998	15.71	20.20	12.26	15.75	20.12	12.41	15.27	19.41	12.07
1999	15.66	20.27	12.16	15.68	20.38	12.05	14.64	17.01	13.13
2000	14.76	19.22	11.27	14.79	19.15	11.33	13.24	16.38	11.00
2001	14.31	18.84	10.69	14.10	18.66	10.44	15.13	18.85	12.66
2002	14.41	18.13	11.48	14.32	18.01	11.37	13.47	16.92	11.40
2003	13.78	17.97	10.50	13.61	17.81	10.27	14.54	18.24	12.13
2004	13.46	17.07	10.56	13.18	16.80	10.21	14.68	18.96	11.75
2005	13.20	17.06	10.09	13.02	16.85	9.90	13.37	15.58	11.79
2006	12.78	15.74	10.39	12.51	15.48	10.06	12.85	15.43	11.29
2007	13.11	16.80	10.02	12.56	16.01	9.61	14.88	18.94	12.15
2008	12.27	15.27	9.79	11.76	14.56	9.43	13.85	17.90	10.89
1975-2008	15.74	20.31	12.30	15.83	20.44	12.38	14.29	17.68	11.94

<sup>a</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).  
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).  
- Statistic not shown. Rate based on less than 16 cases for the time interval.



Table 6.10  
Cancer of the Colon and Rectum (Invasive)

SEER Incidence<sup>a</sup> and U.S. Death<sup>b</sup> Rates, Age-Adjusted and Age-Specific Rates, by Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence</u>									
<u>Age at Diagnosis</u>									
Age-Adjusted Rates, 2004-2008									
All ages	47.2	55.0	41.0	46.5	54.4	40.2	57.8	67.7	51.2
Under 65	18.2	20.7	15.8	17.4	19.9	15.0	24.2	27.2	21.7
65 and over	247.6	292.0	215.3	247.7	292.9	214.4	290.6	347.2	255.3
All ages (IARC world std) <sup>c</sup>	29.2	34.1	25.1	28.6	33.5	24.4	37.0	43.1	32.6
Age-Specific Rates, 2004-2008									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	0.3	0.3	0.3	0.3	0.3	0.3	-	-	-
20-24	0.9	0.9	1.0	1.0	0.8	1.1	0.8	0.9	-
25-29	2.0	2.1	1.9	2.0	2.1	1.9	1.4	1.1	1.7
30-34	4.3	4.2	4.3	4.3	4.4	4.1	4.2	3.2	5.1
35-39	8.3	8.7	7.9	8.1	8.7	7.6	8.8	9.0	8.6
40-44	15.8	16.5	15.1	15.2	15.6	14.8	19.0	20.4	17.7
45-49	28.5	31.4	25.6	27.5	30.5	24.4	34.0	35.8	32.4
50-54	55.4	61.9	49.2	52.1	58.7	45.5	77.9	82.6	73.7
55-59	75.6	89.3	62.5	71.7	85.5	58.4	106.5	124.4	91.7
60-64	108.0	129.7	88.2	104.6	125.6	84.9	151.9	185.3	125.5
65-69	165.2	198.8	135.8	161.2	194.8	131.3	215.7	258.5	183.1
70-74	216.8	262.0	180.1	215.5	260.3	178.3	264.3	321.4	223.6
75-79	272.3	321.3	236.3	274.3	325.1	236.3	304.8	353.1	274.1
80-84	327.4	378.9	294.7	331.6	384.4	298.0	355.8	441.1	309.5
85+	358.2	408.4	335.2	361.7	415.0	337.5	410.4	477.8	384.7
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2004-2008									
All ages									
Under 65									
65 and over									
All ages (IARC world std) <sup>c</sup>									
Age-Specific Rates, 2004-2008									
<1									
1-4									
5-9									
10-14									
15-19									
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54									
55-59									
60-64									
65-69									
70-74									
75-79									
80-84									
85+									

<sup>a</sup> SEER 17 areas. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>c</sup> Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

- Rates are per 100,000 and are age-adjusted to the IARC world standard population.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.11  
Cancer of the Colon (Invasive) and Cancer of the Rectum (Invasive)  
SEER Incidence<sup>a</sup> Rates, Age-Adjusted and Age-Specific Rates, by Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>Cancer of the Colon</u>									
<u>Age at Diagnosis</u>									
Age-Adjusted Rates, 2004-2008									
All ages	33.9	38.3	30.6	33.5	38.0	30.0	43.9	50.1	39.7
Under 65	11.5	12.7	10.4	11.0	12.2	9.8	16.8	18.3	15.6
65 and over	188.9	215.1	170.0	189.2	216.1	169.6	230.9	270.0	206.6
All ages (IARC world std) <sup>b</sup>	20.4	23.0	18.2	19.9	22.6	17.6	27.5	31.2	24.8
Age-Specific Rates, 2004-2008									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	0.2	0.2	0.2	0.2	0.2	0.3	-	-	-
20-24	0.6	0.5	0.6	0.6	0.6	0.6	0.5	-	-
25-29	1.2	1.2	1.2	1.2	1.2	1.2	0.8	-	1.1
30-34	2.7	2.6	2.8	2.6	2.6	2.6	3.0	2.1	3.9
35-39	4.9	5.0	4.8	4.8	5.0	4.6	5.3	5.4	5.2
40-44	9.4	9.6	9.2	9.1	9.2	9.0	11.8	12.5	11.3
45-49	16.8	17.8	15.9	16.2	17.3	15.0	21.5	22.1	21.0
50-54	33.7	36.4	31.2	31.6	34.9	28.4	51.5	51.4	51.5
55-59	48.9	55.8	42.5	46.0	53.1	39.1	77.3	87.4	68.9
60-64	74.0	85.6	63.3	71.0	82.6	60.2	114.2	135.0	97.8
65-69	117.1	135.1	101.3	114.3	132.4	98.1	163.5	188.9	144.3
70-74	161.1	187.3	139.8	160.0	186.2	138.2	206.7	247.6	177.5
75-79	208.5	237.7	187.0	210.2	240.5	187.5	245.2	278.9	223.8
80-84	258.5	290.4	238.2	262.1	294.6	241.3	285.7	350.8	250.3
85+	290.7	323.1	275.8	294.2	329.7	278.0	341.4	386.9	324.1
<u>Cancer of the Rectum</u>									
<u>Age at Diagnosis</u>									
Age-Adjusted Rates, 2004-2008									
All ages	13.2	16.7	10.4	13.0	16.4	10.2	14.0	17.5	11.5
Under 65	6.6	8.0	5.4	6.4	7.7	5.2	7.4	8.9	6.1
65 and over	58.7	76.8	45.3	58.5	76.7	44.8	59.7	77.2	48.7
All ages (IARC world std) <sup>b</sup>	8.9	11.1	6.9	8.7	10.9	6.8	9.5	11.9	7.7
Age-Specific Rates, 2004-2008									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	0.1	-	-	-	-	-	-	-	-
20-24	0.4	0.3	0.4	0.4	0.3	0.4	-	-	-
25-29	0.8	0.9	0.8	0.8	1.0	0.7	0.5	-	-
30-34	1.6	1.6	1.6	1.6	1.7	1.5	1.2	1.1	1.2
35-39	3.4	3.6	3.1	3.3	3.6	3.0	3.5	3.7	3.4
40-44	6.4	6.9	5.9	6.1	6.4	5.8	7.1	8.0	6.4
45-49	11.6	13.6	9.7	11.3	13.2	9.4	12.5	13.6	11.4
50-54	21.7	25.5	18.1	20.5	23.8	17.2	26.4	31.2	22.2
55-59	26.6	33.6	20.1	25.7	32.5	19.2	29.2	36.9	22.8
60-64	34.1	44.1	24.9	33.5	43.0	24.7	37.7	50.3	27.7
65-69	48.1	63.7	34.5	46.9	62.3	33.2	52.1	69.6	38.9
70-74	55.7	74.7	40.3	55.6	74.1	40.1	57.6	73.7	46.1
75-79	63.9	83.6	49.4	64.1	84.6	48.8	59.6	74.3	50.3
80-84	68.9	88.5	56.5	69.5	89.8	56.6	70.1	90.3	59.2
85+	67.5	85.3	59.4	67.6	85.2	59.5	68.9	90.9	60.6

<sup>a</sup> SEER 17 areas. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

<sup>b</sup> Rates are per 100,000 and are age-adjusted to the IARC world standard population.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.12  
Cancer of the Colon and Rectum (Invasive)

5-Year Relative and Period Survival (Percent) by Race, Sex, Diagnosis Year, Stage and Age

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 <sup>a</sup>	-	-	-	-	-	-	-	-	-
1970-1973 <sup>a</sup>	-	-	-	-	-	-	-	-	-
1975-1977 <sup>b</sup>	50.0	49.2	50.8	50.2	49.6	50.9	45.1	43.4	46.4
1978-1980 <sup>b</sup>	51.4	50.5	52.3	51.8	50.8	52.6	45.6	43.6	47.0
1981-1983 <sup>b</sup>	54.3	54.0	54.5	54.7	54.7	54.6	46.6	42.8	49.7
1984-1986 <sup>b</sup>	57.9	57.9	57.8	58.6	58.7	58.4	48.4	47.5	49.2
1987-1989 <sup>b</sup>	59.8	60.1	59.5	60.3	60.8	59.7	52.4	50.1	54.5
1990-1992 <sup>b</sup>	61.4	61.3	61.6	62.2	62.0	62.4	53.0	54.6	51.5
1993-1995 <sup>b</sup>	60.1	59.9	60.4	60.8	60.5	61.0	52.1	51.3	52.7
1996-2000 <sup>b</sup>	63.6	63.9	63.3	64.5	64.7	64.4	53.8	54.6	53.1
2001-2007 <sup>b</sup>	66.0 <sup>e</sup>	66.4 <sup>e</sup>	65.6 <sup>e</sup>	67.1 <sup>e</sup>	67.9 <sup>e</sup>	66.3 <sup>e</sup>	56.3 <sup>e</sup>	54.7 <sup>e</sup>	57.6 <sup>e</sup>
5-Year Period Survival (Percent) <sup>cd</sup>									
2007	65.1	65.4	64.7	65.7	66.2	65.1	57.5	56.3	58.5
Stage Distribution (%) 2001-2007 <sup>c</sup>									
All Stages									
Number of cases	200,444	101,559	98,885	162,053	82,703	79,350	20,841	9,687	11,154
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	39	40	38	39	40	38	35	35	36
Regional	37	36	37	37	36	37	35	35	35
Distant	20	20	20	19	19	19	24	25	24
Unstaged	5	4	5	5	4	5	5	5	6
5-Year Relative Survival (Percent), 2001-2007 <sup>c</sup>									
Age at Diagnosis:									
Ages <45	67.3	66.1	68.6	68.8	66.8	71.1	58.9	58.3	59.4
Ages 45-54	69.5	68.4	70.9	70.3	69.4	71.6	60.5	57.4	63.4
Ages 55-64	67.8	67.2	68.8	68.5	68.0	69.3	60.3	58.5	62.2
Ages 65-74	66.4	66.1	66.8	67.0	66.9	67.1	59.0	56.9	60.8
Ages 75+	58.4	59.0	58.0	59.7	60.5	59.2	44.7	43.2	45.5
Ages <65	68.3	67.4	69.5	69.2	68.3	70.4	60.1	58.1	62.2
Ages 65+	61.7	62.4	61.1	62.5	63.4	61.8	51.8	51.1	52.3
Stage:									
All Stages	64.3	64.6	64.0	65.0	65.5	64.5	56.0	55.0	56.9
Localized	90.1	90.1	90.0	90.6	90.7	90.4	85.1	83.2	86.6
Regional	69.2	69.1	69.4	69.7	69.7	69.7	63.5	62.8	64.0
Distant	11.7	11.1	12.3	12.1	11.5	12.8	8.5	7.8	9.0
Unstaged	33.3	36.8	30.3	31.4	35.0	28.3	33.8	35.1	32.6

<sup>a</sup> Based on End Results data from a series of hospital registries and one population-based registry.

<sup>b</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

Based on follow-up of patients into 2008.

<sup>c</sup> SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Based on follow-up of patients into 2008.

<sup>d</sup> Period survival provides a 2007 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2005-2007: 0-1 year survival), (2004-2006: 1-2 year survival), (2003-2005: 2-3 year survival), (2002-2004: 3-4 year survival), (2001-2003: 4-5 years survival).

<sup>e</sup> The difference between 1975-1977 and 2001-2007 is statistically significant ( $p < .05$ ).

<sup>f</sup> The standard error is between 5 and 10 percentage points.

<sup>g</sup> The standard error is greater than 10 percentage points.

- Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 6.13  
Cancer of the Colon (Invasive)

5-Year Relative and Period Survival (Percent) by Race, Sex, Diagnosis Year, Stage and Age

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 <sup>a</sup>	-	-	-	43	42	44	34	32	35
1970-1973 <sup>a</sup>	-	-	-	49	47	50	37	36	38
1975-1977 <sup>b</sup>	50.9	50.3	51.3	51.1	50.7	51.4	45.3	43.9	46.1
1978-1980 <sup>b</sup>	52.5	51.5	53.4	52.6	51.6	53.5	49.0	47.5	50.0
1981-1983 <sup>b</sup>	55.4	55.8	55.0	55.7	56.4	55.0	48.7	44.9	51.7
1984-1986 <sup>b</sup>	58.5	59.0	58.0	59.2	59.8	58.6	49.2	48.8	49.5
1987-1989 <sup>b</sup>	60.4	61.0	59.9	60.9	61.7	60.1	52.5	50.8	53.8
1990-1992 <sup>b</sup>	62.2	62.5	61.9	63.0	63.3	62.7	53.5	55.0	52.3
1993-1995 <sup>b</sup>	60.1	60.3	59.9	60.8	61.0	60.6	51.5	51.0	51.8
1996-2000 <sup>b</sup>	63.3	64.0	62.7	64.4	64.9	63.9	53.5	54.8	52.4
2001-2007 <sup>b</sup>	65.2 <sup>e</sup>	65.6 <sup>e</sup>	64.9 <sup>e</sup>	66.5 <sup>e</sup>	67.2 <sup>e</sup>	65.8 <sup>e</sup>	54.8 <sup>e</sup>	53.0 <sup>e</sup>	56.1 <sup>e</sup>
5-Year Period Survival (Percent) <sup>cd</sup>									
2007	64.4	64.9	64.0	65.1	65.7	64.5	56.8	56.0	57.5
Stage Distribution (%) 2001-2007 <sup>c</sup>									
All Stages									
Number of cases	141,931	68,502	73,429	114,873	55,881	58,992	15,617	7,022	8,595
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	37	38	36	37	38	37	33	33	33
Regional	38	38	39	38	38	39	37	37	37
Distant	21	21	21	20	20	20	26	26	25
Unstaged	4	4	5	4	4	5	5	4	5
5-Year Relative Survival (Percent), 2001-2007 <sup>c</sup>									
Age at Diagnosis:									
Ages <45	65.9	65.4	66.4	67.9	66.0	69.9	58.4	60.3	56.6
Ages 45-54	66.8	65.9	68.0	67.8	67.1	68.7	58.7	55.9	61.1
Ages 55-64	66.4	66.1	66.9	67.4	67.2	67.6	58.4	57.2	59.8
Ages 65-74	66.4	66.2	66.6	67.0	67.1	66.9	59.1	56.8	61.1
Ages 75+	59.6	60.2	59.1	60.9	61.7	60.3	45.8	44.6	46.4
Ages <65	66.5	65.9	67.2	67.6	67.0	68.3	58.5	57.2	59.8
Ages 65+	62.2	62.9	61.6	63.1	64.0	62.3	52.3	51.5	52.9
Stage:									
All Stages	63.6	64.0	63.2	64.5	65.1	64.0	55.2	54.4	55.8
Localized	91.1	91.4	90.8	91.7	92.2	91.1	86.1	83.9	87.6
Regional	69.8	69.6	70.0	70.3	70.2	70.4	64.6	64.2	65.0
Distant	11.4	10.8	12.0	11.9	11.2	12.4	8.3	7.7	8.9
Unstaged	27.4	31.3	24.5	25.9	29.7	23.1	27.0	30.8	24.4

<sup>a</sup> Based on End Results data from a series of hospital registries and one population-based registry.

<sup>b</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

Based on follow-up of patients into 2008.

<sup>c</sup> SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Based on follow-up of patients into 2008.

<sup>d</sup> Period survival provides a 2007 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2005-2007: 0-1 year survival), (2004-2006: 1-2 year survival), (2003-2005: 2-3 year survival), (2002-2004: 3-4 year survival), (2001-2003: 4-5 years survival).

<sup>e</sup> The difference between 1975-1977 and 2001-2007 is statistically significant ( $p < .05$ ).

<sup>f</sup> The standard error is between 5 and 10 percentage points.

<sup>g</sup> The standard error is greater than 10 percentage points.

- Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 6.14  
Cancer of the Rectum (Invasive)

5-Year Relative and Period Survival (Percent) by Race, Sex, Diagnosis Year, Stage and Age

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 <sup>a</sup>	-	-	-	38	36	41	27	28	27
1970-1973 <sup>a</sup>	-	-	-	45	43	48	30	20	40
1975-1977 <sup>b</sup>	48.3	47.2	49.6	48.4	47.5	49.5	44.6	41.8	46.9
1978-1980 <sup>b</sup>	49.1	48.6	49.6	49.9	49.5	50.3	34.9	34.0	35.6
1981-1983 <sup>b</sup>	51.7	50.5	53.1	52.4	51.3	53.6	39.8	37.3	42.4
1984-1986 <sup>b</sup>	56.5	55.9	57.3	57.3	56.7	57.9	45.8	43.5	48.0
1987-1989 <sup>b</sup>	58.3	58.1	58.5	58.8	59.1	58.5	52.3	47.7	57.1
1990-1992 <sup>b</sup>	59.5	58.7	60.6	60.2	59.3	61.4	51.3	53.5	48.7
1993-1995 <sup>b</sup>	60.4	59.2	61.8	60.8	59.7	62.2	54.0	51.8	56.5
1996-2000 <sup>b</sup>	64.4	63.8	65.1	65.0	64.3	65.7	54.8	54.2	55.3
2001-2007 <sup>b</sup>	68.0 <sup>e</sup>	68.2 <sup>e</sup>	67.6 <sup>e</sup>	68.7 <sup>e</sup>	69.5 <sup>e</sup>	67.8 <sup>e</sup>	60.9 <sup>e</sup>	59.0 <sup>e</sup>	62.7 <sup>e</sup>
5-Year Period Survival (Percent) <sup>cd</sup>									
2007	66.7	66.6	66.8	67.0	67.1	66.8	59.3	56.9	61.6
Stage Distribution (%) 2001-2007 <sup>c</sup>									
All Stages									
Number of cases	58,513	33,057	25,456	47,180	26,822	20,358	5,224	2,665	2,559
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	44	44	44	44	44	44	43	41	45
Regional	33	34	32	33	34	33	29	31	28
Distant	17	18	17	17	17	17	20	21	18
Unstaged	6	5	7	5	5	6	8	7	8
5-Year Relative Survival (Percent), 2001-2007 <sup>c</sup>									
Age at Diagnosis:									
Ages <45	69.4	67.0	72.2	70.2	68.0	73.0	59.6	54.7	65.1
Ages 45-54	73.6	71.8	76.1	74.1	72.5	76.5	64.2	60.3	68.7
Ages 55-64	70.6	69.2	73.0	70.7	69.3	73.1	65.4	62.1	69.5
Ages 65-74	66.5	65.8	67.5	67.0	66.5	67.9	58.4	57.3	59.2
Ages 75+	54.6	55.4	53.8	55.6	56.8	54.6	39.9	37.2	41.0
Ages <65	71.5	69.8	74.0	71.9	70.3	74.3	64.0	60.1	68.5
Ages 65+	60.3	61.1	59.4	61.0	62.0	59.8	50.0	49.8	49.7
Stage:									
All Stages	66.0	65.8	66.2	66.3	66.3	66.3	58.5	56.4	60.4
Localized	88.1	87.9	88.4	88.4	88.2	88.6	83.0	81.6	84.2
Regional	67.7	68.0	67.3	68.3	68.6	67.8	59.2	58.4	59.8
Distant	12.6	11.9	13.7	12.9	12.1	13.8	8.9	8.2	9.7
Unstaged	43.9	45.1	42.7	41.7	43.4	39.9	45.7	41.6	48.9

<sup>a</sup> Based on End Results data from a series of hospital registries and one population-based registry.

<sup>b</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

Based on follow-up of patients into 2008.

<sup>c</sup> SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Based on follow-up of patients into 2008.

<sup>d</sup> Period survival provides a 2007 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2005-2007: 0-1 year survival), (2004-2006: 1-2 year survival), (2003-2005: 2-3 year survival), (2002-2004: 3-4 year survival), (2001-2003: 4-5 years survival).

<sup>e</sup> The difference between 1975-1977 and 2001-2007 is statistically significant ( $p < .05$ ).

<sup>f</sup> The standard error is between 5 and 10 percentage points.

<sup>g</sup> The standard error is greater than 10 percentage points.

- Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 6.15  
Cancer of the Colon and Rectum (Invasive)

SEER<sup>a</sup> Relative Survival (Percent)  
By Year of Diagnosis

All Races, Males and Females

	Year of Diagnosis																				
	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Survival Time																					
1-year	74.7	77.8	80.6	81.7	82.4	81.6	80.6	81.4	80.0	81.8	80.9	82.5	82.7	82.4	83.5	83.7	82.9	83.9	84.2	84.0	84.3
2-year	63.5	67.3	71.5	73.1	73.6	72.9	72.2	72.6	71.7	73.7	72.8	75.0	74.9	74.8	76.1	77.2	76.2	77.0	77.0	77.4	
3-year	57.1	60.8	66.0	67.9	67.9	67.2	66.9	67.5	66.0	68.8	67.6	69.7	70.2	70.5	71.3	72.4	71.1	71.8	72.5		
4-year	53.2	56.7	62.1	63.5	64.3	63.5	62.8	63.4	62.2	65.1	64.6	66.6	67.1	67.1	68.4	69.1	67.9	68.5			
5-year	50.6	53.9	59.5	61.1	61.8	61.3	60.0	60.4	60.0	62.8	61.8	63.5	64.8	65.1	66.3	66.4	65.6				
6-year	48.7	51.9	57.8	59.6	59.9	59.7	58.4	58.7	57.5	61.4	60.0	61.7	63.3	63.2	64.3	64.6					
7-year	47.5	50.4	56.2	57.9	58.4	58.1	56.7	57.3	55.8	60.3	59.1	60.3	62.3	61.8	62.4						
8-year	46.6	49.4	55.2	56.4	57.1	56.6	55.7	56.3	55.2	59.6	58.2	59.5	60.9	60.4							
9-year	46.0	48.7	54.3	55.6	55.9	55.7	54.7	55.9	54.9	58.8	57.4	58.3	60.1								
10-year	45.3	47.9	53.5	55.0	55.3	55.0	54.1	54.9	54.2	58.1	56.7	57.6									
11-year	44.7	47.3	53.0	54.4	55.1	54.3	53.2	54.5	53.3	57.5	55.8										
12-year	44.3	46.9	52.6	53.9	54.9	54.2	52.3	53.8	52.7	57.4											
13-year	43.9	46.6	51.9	53.4	54.5	53.5	51.8	53.7	52.1												
14-year	43.4	46.1	51.6	52.9	54.1	53.1	51.3	53.2													
15-year	43.0	45.8	51.0	52.2	53.9	53.1	50.5														
16-year	42.6	45.3	50.7	52.0	53.9	53.1															
17-year	42.2	44.9	50.1	51.9	53.2																
18-year	41.7	44.5	49.9	51.2																	
19-year	41.7	44.1	49.5																		
20-year	41.5	43.8																			

<sup>a</sup> Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Table 6.16  
Cancer of the Colon and Rectum (Invasive)

SEER<sup>a</sup> Relative Survival (Percent)  
By Year of Diagnosis

All Races, Males

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Survival Time																					
1-year	74.6	78.7	81.6	82.9	83.1	82.6	81.2	82.4	81.5	83.2	81.8	82.6	83.8	84.2	85.4	83.6	83.7	84.9	85.0	85.1	85.6
2-year	63.5	67.7	72.8	74.0	74.6	73.8	72.7	73.4	73.0	75.3	74.1	74.9	75.5	76.7	77.8	76.9	76.6	78.3	78.0	78.6	
3-year	56.6	60.9	67.1	69.0	68.7	67.8	67.4	68.5	67.2	70.0	68.5	69.1	70.8	72.3	73.0	72.2	71.5	72.8	73.3		
4-year	52.4	56.5	62.7	64.2	64.5	63.6	62.8	63.5	63.3	65.5	65.6	65.6	67.6	69.1	70.0	68.9	68.2	69.4			
5-year	49.6	53.5	60.0	61.1	61.6	61.0	59.7	59.9	60.2	62.7	62.6	62.6	65.0	66.4	67.4	65.9	65.7				
6-year	47.4	51.3	58.0	59.2	58.9	59.4	58.2	58.0	57.5	61.1	60.6	60.4	63.8	64.1	65.1	63.7					
7-year	46.1	49.7	56.4	57.1	57.0	57.9	56.4	56.5	55.9	59.9	59.9	58.9	62.7	62.3	63.2						
8-year	45.0	48.6	55.4	55.6	55.6	56.1	55.6	54.9	55.3	59.5	58.5	57.6	61.4	60.4							
9-year	44.3	47.7	54.4	55.0	54.6	55.1	54.1	54.3	54.8	59.1	57.5	56.5	60.2								
10-year	43.5	46.9	53.7	54.4	53.8	54.6	53.1	53.0	54.2	58.2	57.0	55.9									
11-year	43.0	46.2	53.3	53.9	53.8	53.9	51.8	52.9	53.3	57.4	56.1										
12-year	42.4	45.7	52.7	53.4	53.7	53.9	51.4	51.9	52.5	57.2											
13-year	41.9	45.4	52.1	52.9	53.3	53.2	50.2	51.5	52.1												
14-year	41.2	44.8	52.0	52.4	52.2	52.6	49.8	51.1													
15-year	40.9	44.6	51.4	51.7	51.8	52.5	49.0														
16-year	40.5	44.4	51.2	51.6	51.8	52.5															
17-year	40.1	43.8	50.7	51.6	50.9																
18-year	39.7	43.5	50.4	50.9																	
19-year	39.5	43.1	50.0																		
20-year	39.4	42.7																			

<sup>a</sup> Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Table 6.17  
Cancer of the Colon and Rectum (Invasive)

SEER<sup>a</sup> Relative Survival (Percent)  
By Year of Diagnosis

All Races, Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Survival Time																					
1-year	74.7	77.0	79.6	80.5	81.6	80.4	79.9	80.4	78.5	80.4	79.9	82.4	81.5	80.7	81.5	83.8	82.1	82.9	83.4	82.9	82.9
2-year	63.5	66.9	70.2	72.1	72.6	72.0	71.6	71.8	70.4	72.0	71.5	75.0	74.2	72.9	74.3	77.6	75.7	75.6	76.0	76.2	
3-year	57.7	60.6	64.9	66.6	67.0	66.6	66.5	66.6	64.9	67.6	66.7	70.3	69.7	68.7	69.6	72.5	70.7	70.7	71.6		
4-year	54.0	56.8	61.5	62.8	64.0	63.5	62.9	63.3	61.1	64.8	63.5	67.6	66.5	65.1	66.8	69.4	67.6	67.6			
5-year	51.6	54.3	59.1	61.0	62.1	61.6	60.4	60.9	59.8	62.9	61.0	64.5	64.5	63.7	65.1	67.0	65.4				
6-year	50.0	52.5	57.4	59.9	60.8	60.1	58.7	59.5	57.5	61.6	59.4	63.0	62.8	62.4	63.5	65.5					
7-year	48.9	51.2	56.0	58.6	59.8	58.3	57.0	58.1	55.7	60.7	58.1	61.6	61.8	61.4	61.5						
8-year	48.0	50.2	54.8	57.3	58.7	57.1	55.8	57.7	55.1	59.5	57.8	61.3	60.5	60.5							
9-year	47.5	49.5	54.1	56.3	57.3	56.4	55.4	57.6	54.8	58.5	57.2	60.2	60.0								
10-year	46.9	48.9	53.3	55.5	56.8	55.5	55.1	56.6	54.2	57.9	56.3	59.2									
11-year	46.3	48.3	52.7	54.8	56.2	54.8	54.6	56.1	53.3	57.5	55.5										
12-year	46.1	47.9	52.5	54.4	56.1	54.4	53.2	55.8	52.8	57.5											
13-year	45.8	47.6	51.6	53.8	55.7	53.8	53.1	55.8	52.0												
14-year	45.3	47.3	51.2	53.3	55.6	53.6	52.7	55.2													
15-year	44.8	46.9	50.6	52.7	55.6	53.6	51.9														
16-year	44.4	46.1	50.2	52.4	55.6	53.6															
17-year	44.2	45.9	49.6	51.9	55.6																
18-year	43.6	45.5	49.2	51.1																	
19-year	43.6	45.0	48.9																		
20-year	43.4	44.8																			

<sup>a</sup>

Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).



Table 6.21  
Cancer of the Colon and Rectum (Invasive)

SEER Incidence and U.S. Mortality  
Age-Adjusted Rates and Trends<sup>a</sup>  
By Race/Ethnicity and Sex

SEER Incidence	SEER 17 Areas <sup>b</sup>			SEER 13 Areas <sup>b</sup>			SEER 9 Areas <sup>b</sup>		
	Rate 2004-2008			Trend 1999-2008 <sup>c</sup>			Trend 1999-2008 <sup>d</sup>		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
RACE/ETHNICITY	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	47.2	55.0	41.0	-2.4*	-2.7*	-2.1*	-2.5*	-2.9*	-2.2*
White	46.5	54.4	40.2	-2.6*	-3.0*	-2.3*	-2.7*	-3.1*	-2.4*
White Hispanic <sup>e</sup>	33.9	40.6	28.6	-2.0*	-2.5*	-0.8*	-	-	-
White Non-Hispanic <sup>e</sup>	48.4	56.5	41.9	-2.5*	-2.9*	-2.3*	-	-	-
Black	57.8	67.7	51.2	-1.6*	-0.9*	-1.6*	-1.7*	-1.0*	-1.8*
Asian/Pacific Islander	39.4	45.4	34.6	-1.1*	-2.2*	-0.8*	-	-	-
Amer Ind/Alaska Nat <sup>f</sup>	41.4	42.7	40.0	-0.5	-1.1	0.0	-	-	-
Hispanic <sup>e</sup>	33.4	39.9	28.4	-1.9*	-2.4*	-0.7*	-	-	-

U.S. Mortality <sup>g</sup>	Rate 2004-2008			Trend 1999-2008 <sup>h</sup>		
	Rate per 100,000 persons			AAPC (%)		
	Total	Males	Females	Total	Males	Females
RACE/ETHNICITY						
All Races						
White						
White Hispanic <sup>e</sup>						
White Non-Hispanic <sup>e</sup>						
Black						
Asian/Pacific Islander						
Amer Ind/Alaska Nat						
Total U.S.						
CHSDA Counties						
Non-CHSDA Counties						
Hispanic <sup>e</sup>						

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Trend based on less than 10 cases for at least one year within the time interval.

<sup>a</sup> Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130). Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

<sup>b</sup> The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta.

The SEER 13 areas comprise the SEER 9 areas plus San Jose-Monterey, Los Angeles, the Alaska Native Registry and Rural Georgia.

The SEER 17 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

<sup>c</sup> The 1999-2008 AAPC estimates are based on a Joinpoint analysis with up to 3 Joinpoints over diagnosis years 1992-2008.

<sup>d</sup> The 1999-2008 AAPC estimates are based on a Joinpoint analysis with up to 5 Joinpoints over diagnosis years 1975-2008.

<sup>e</sup> Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. The 2004-2008 Hispanic and Non-Hispanic death rates exclude deaths from the District of Columbia, New Hampshire, and North Dakota. The 1999-2008 Hispanic and Non-Hispanic mortality trends exclude deaths from Connecticut, the District of Columbia, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma and Vermont.

<sup>f</sup> Incidence data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

<sup>g</sup> US Mortality Files, National Center for Health Statistics, CDC.

<sup>h</sup> The 1999-2008 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2008.

\* The APC is significantly different from zero (p<.05).

Table 6.22  
Cancer of the Colon (Invasive) and Cancer of the Rectum (Invasive)

SEER Incidence  
Age-Adjusted Rates and Trends<sup>a</sup>  
By Race/Ethnicity and Sex

Cancer of the Colon SEER Incidence	SEER 17 Areas <sup>b</sup> Rate 2004-2008 Rate per 100,000 persons			SEER 13 Areas <sup>b</sup> Trend 1999-2008 <sup>c</sup> AAPC (%)			SEER 9 Areas <sup>b</sup> Trend 1999-2008 <sup>d</sup> AAPC (%)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
	RACE/ETHNICITY								
All Races	33.9	38.3	30.6	-2.4*	-2.8*	-2.0*	-2.6*	-2.9*	-2.2*
White	33.5	38.0	30.0	-2.5*	-3.0*	-2.2*	-2.6*	-3.1*	-2.3*
White Hispanic <sup>e</sup>	23.6	27.2	20.8	-1.8*	-2.3*	-0.7*	-	-	-
White Non-Hispanic <sup>e</sup>	34.9	39.6	31.2	-2.5*	-2.9*	-2.1*	-	-	-
Black	43.9	50.1	39.7	-1.9*	-2.3*	-1.8*	-2.2*	-2.5*	-2.1*
Asian/Pacific Islander	26.3	28.5	24.6	-2.1*	-1.6*	-0.8*	-	-	-
Amer Ind/Alaska Nat <sup>f</sup>	30.0	28.6	30.8	-0.7	-1.9	0.3	-	-	-
Hispanic <sup>e</sup>	23.3	26.7	20.7	-1.8*	-2.2*	-0.6*	-	-	-
Cancer of the Rectum SEER Incidence	SEER 17 Areas <sup>b</sup> Rate 2004-2008 Rate per 100,000 persons			SEER 13 Areas <sup>b</sup> Trend 1999-2008 <sup>c</sup> AAPC (%)			SEER 9 Areas <sup>b</sup> Trend 1999-2008 <sup>d</sup> AAPC (%)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
	RACE/ETHNICITY								
All Races	13.2	16.7	10.4	-2.3*	-2.5*	-2.2*	-2.4*	-2.7*	-2.2*
White	13.0	16.4	10.2	-2.7*	-3.0*	-2.7*	-2.8*	-3.3*	-2.7*
White Hispanic <sup>e</sup>	10.3	13.4	7.8	-1.5*	-2.0*	-1.2*	-	-	-
White Non-Hispanic <sup>e</sup>	13.5	16.9	10.6	-2.7*	-2.9*	-2.6*	-	-	-
Black	14.0	17.5	11.5	-0.4	-0.5	-0.2	-0.1	0.0	-0.2
Asian/Pacific Islander	13.0	16.9	9.9	-0.8*	-1.0*	-0.6	-	-	-
Amer Ind/Alaska Nat <sup>f</sup>	11.5	14.1	9.2	-0.2	-	-	-	-	-
Hispanic <sup>e</sup>	10.1	13.2	7.7	-1.4*	-1.9*	-1.1*	-	-	-

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Trend based on less than 10 cases for at least one year within the time interval.

<sup>a</sup> Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130). Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

<sup>b</sup> The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta.

The SEER 13 areas comprise the SEER 9 areas plus San Jose-Monterey, Los Angeles, the Alaska Native Registry and Rural Georgia.

The SEER 17 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

<sup>c</sup> The 1999-2008 AAPC estimates are based on a Joinpoint analysis with up to 3 Joinpoints over diagnosis years 1992-2008.

<sup>d</sup> The 1999-2008 AAPC estimates are based on a Joinpoint analysis with up to 5 Joinpoints over diagnosis years 1975-2008.

<sup>e</sup> Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

<sup>f</sup> Incidence data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

\* The APC is significantly different from zero ( $p < .05$ ).

Table 6.23  
Cancer of the Colon and Rectum (Invasive)

Age-Adjusted SEER Incidence Rates<sup>a</sup>  
By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence Rates<sup>a</sup>, 2004-2008</u>									
Atlanta & Rural Georgia	42.71	49.59	37.87	38.20	45.52	32.70	54.88	62.84	50.04
Atlanta	42.37	48.50	38.08	37.85	44.67	32.72	54.92	61.44	51.06
Rural Georgia	48.39	67.15	34.32	43.63	58.20	32.40	57.98	86.84	38.41
California	44.19	51.15	38.59	43.62	50.71	37.85	56.68	64.57	50.71
Greater Bay Area	44.26	49.79	39.74	43.90	49.55	39.29	56.36	63.35	51.20
San Francisco-Oakland	45.52	51.29	40.84	44.99	51.09	40.00	56.45	64.05	50.63
San Jose-Monterey	41.68	46.79	37.42	41.92	46.76	37.95	54.59	63.53	52.88
Los Angeles	45.32	52.76	39.56	43.52	50.84	37.76	58.87	66.89	53.25
Greater California	43.64	50.91	37.72	43.59	51.02	37.50	54.05	62.52	47.02
Connecticut	49.16	57.39	42.92	48.69	57.02	42.34	54.37	61.29	49.27
Detroit	50.55	58.89	44.56	47.91	55.66	42.12	61.76	74.85	53.51
Hawaii	49.16	59.69	39.79	49.38	58.74	40.10	28.44	38.17	-
Iowa	53.46	61.26	47.05	53.30	61.17	46.82	63.34	79.80	54.21
Kentucky	55.74	66.65	47.41	55.23	66.15	46.79	65.44	80.29	56.11
Louisiana	53.90	66.01	44.76	51.31	63.16	41.92	63.03	78.32	53.11
New Jersey	51.28	60.56	44.38	51.24	60.98	43.91	54.79	62.06	49.98
New Mexico	40.38	46.19	35.51	41.11	47.17	36.01	26.27	20.78	29.51
Seattle-Puget Sound	44.20	50.95	38.58	44.17	50.82	38.55	54.07	59.88	48.48
Utah	36.32	42.20	31.22	36.77	42.74	31.58	24.02	-	-
9 SEER Areas <sup>b</sup>	46.58	53.60	40.97	45.78	52.82	40.07	57.13	65.97	51.26
11 SEER Areas <sup>b</sup>	46.02	53.02	40.45	45.09	52.06	39.46	57.58	66.12	51.84
13 SEER Areas <sup>b</sup>	46.11	53.14	40.52	45.09	52.08	39.44	57.56	66.39	51.63
17 SEER Areas <sup>b</sup>	47.17	54.98	40.99	46.51	54.42	40.17	57.85	67.66	51.21

<sup>a</sup>

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130)

<sup>b</sup>

The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta.

The SEER 11 areas comprise the SEER 9 areas plus San Jose-Monterey and Los Angeles.

The SEER 13 areas comprise the SEER 11 areas plus the Alaska Native Registry and Rural Georgia.

The SEER 17 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

-

Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.28  
Cancer of the Colon and Rectum (Invasive)

Estimated United States Cancer Prevalence Counts<sup>a</sup> on January 1, 2008  
By Race/Ethnicity, Sex and Years Since Diagnosis

Years Since Diagnosis		0 to <5	5 to <10	10 to <15	15 to <20	20 to <25	25 to <30	0 to <18 <sup>e</sup>	0 to <33 <sup>e</sup>	>=33 <sup>g</sup>	Complete <sup>h</sup>
<u>Race</u>	<u>Sex</u>										
All Races <sup>b</sup>	Both Sexes	405,303	270,741	166,502	114,834	70,032	38,374	915,005	1,078,730	31,347	1,110,077
	Males	203,619	135,867	81,515	56,282	32,296	15,683	457,112	531,058	11,069	542,127
	Females	201,684	134,874	84,987	58,552	37,736	22,691	457,893	547,672	20,278	567,950
White <sup>b</sup>	Both Sexes	341,574	235,193	145,609	101,365	62,575	34,312	782,775	928,164	27,784	955,948
	Males	174,185	119,126	71,669	50,297	28,945	14,085	395,488	461,862	9,942	471,804
	Females	167,389	116,067	73,940	51,068	33,630	20,227	387,287	466,302	17,842	484,144
Black <sup>b</sup>	Both Sexes	42,521	23,539	13,788	9,403	5,297	2,589	88,112	101,010	2,243	103,253
	Males	18,470	10,253	6,026	3,919	2,151	943	38,476	43,350	708	44,058
	Females	24,051	13,286	7,762	5,484	3,146	1,646	49,636	57,660	1,535	59,195
Asian/ Pacific Islander <sup>c</sup>	Both Sexes	15,128	9,202	5,447	+	+	+	31,769	+	+	+
	Males	7,852	4,753	2,851	+	+	+	16,409	+	+	+
	Females	7,276	4,449	2,596	+	+	+	15,360	+	+	+
Hispanic <sup>d</sup>	Both Sexes	23,150	11,311	9,171	+	+	+	43,633	+	+	+
	Males	12,178	5,949	4,687	+	+	+	22,815	+	+	+
	Females	10,972	5,362	4,484	+	+	+	20,818	+	+	+

Estimated prevalence percent<sup>a</sup> on January 1, 2008, of the SEER 11 population diagnosed in the previous 18 years  
By Age at Prevalence, Race/Ethnicity and Sex

Age at Prevalence		Age Specific (Crude)										Age-Adjusted <sup>f</sup>
		All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	All Ages
<u>Race</u>	<u>Sex</u>											
All Races <sup>c</sup>	Both Sexes	0.2568%	-	0.0002%	0.0049%	0.0238%	0.0965%	0.3139%	0.7469%	1.4385%	2.0905%	0.2632%
	Males	0.2609%	-	-	0.0046%	0.0242%	0.1014%	0.3489%	0.8839%	1.7230%	2.3760%	0.3054%
	Females	0.2527%	-	0.0004%	0.0051%	0.0235%	0.0916%	0.2805%	0.6228%	1.2141%	1.9325%	0.2303%
White <sup>c</sup>	Both Sexes	0.2675%	-	0.0003%	0.0049%	0.0234%	0.0931%	0.2990%	0.7276%	1.4408%	2.1100%	0.2602%
	Males	0.2716%	-	-	0.0047%	0.0238%	0.0963%	0.3371%	0.8681%	1.7268%	2.3951%	0.3029%
	Females	0.2633%	-	0.0004%	0.0052%	0.0229%	0.0897%	0.2612%	0.5966%	1.2099%	1.9528%	0.2260%
Black <sup>c</sup>	Both Sexes	0.2087%	-	-	0.0039%	0.0243%	0.1090%	0.3852%	0.9106%	1.4879%	2.0150%	0.2864%
	Males	0.1956%	-	-	0.0033%	0.0232%	0.1151%	0.4023%	1.0208%	1.6454%	2.0754%	0.3098%
	Females	0.2207%	-	-	0.0045%	0.0253%	0.1037%	0.3710%	0.8258%	1.3800%	1.9870%	0.2703%
Asian/ Pacific Islander <sup>c</sup>	Both Sexes	0.2381%	-	-	0.0038%	0.0244%	0.1000%	0.3259%	0.7174%	1.3527%	1.9526%	0.2532%
	Males	0.2530%	-	-	0.0041%	0.0252%	0.1137%	0.3530%	0.8544%	1.6866%	2.3414%	0.3017%
	Females	0.2241%	-	-	0.0036%	0.0237%	0.0874%	0.3022%	0.6008%	1.1030%	1.7082%	0.2167%
Hispanic <sup>d</sup>	Both Sexes	0.0954%	-	-	0.0036%	0.0177%	0.0672%	0.2217%	0.5482%	0.9793%	1.3633%	0.1830%
	Males	0.0957%	-	-	0.0039%	0.0171%	0.0652%	0.2401%	0.6375%	1.2783%	1.5891%	0.2172%
	Females	0.0951%	-	-	0.0033%	0.0183%	0.0694%	0.2040%	0.4713%	0.7575%	1.2317%	0.1576%

<sup>a</sup> US 2008 cancer prevalence counts are based on 2008 cancer prevalence proportions from the SEER registries and 1/1/2008 US population estimates based on the average of 2007 and 2008 population estimates from the US Bureau of the Census.

<sup>b c d</sup> Prevalence was calculated using the First Malignant Primary Only for a person. Statistics based on (b) SEER 9 Areas (c) SEER 11 Areas and Rural Georgia (d) NHIA for Hispanic for SEER 11 Areas and Rural Georgia.

<sup>e</sup> Maximum limited-duration prevalence: 33 years for 1975-2008 SEER 9 data; 18 years for 1990-2008 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

<sup>f</sup> Percentages are age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) by 5-year age groups.

<sup>g h i</sup> (g) Cases diagnosed more than 33 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000). (h) Complete prevalence is obtained by summing 0 to <33 and >=33. (i) Age-specific completeness index was approximated using empirical data from historical Connecticut tumor registry.

- Statistic not shown. Statistic based on fewer than 5 cases estimated alive in SEER for the time interval.

+ Not available.

Table 6.29

## Cancer of the Colon And Rectum (Invasive)

Percent Distribution and Counts by Histology among Histologically Confirmed Cases, 2004-2008  
Both Sexes by Race

Histology <sup>a</sup>	All Races		White		Black		Asian/Pacific Islander		American Indian/ Alaska Native <sup>b</sup>		Hispanic <sup>c</sup>	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Carcinoma	170,815	99.5%	138,167	99.5%	17,517	99.5%	12,709	99.6%	812	98.9%	13,882	99.4%
Epidermoid carcinoma <sup>d</sup> (8051-8131)	777	0.5%	650	0.5%	100	0.6%	-	-	-	-	59	0.4%
Squamous cell carcinoma (8070-8078,8083-8084)	719	0.4%	599	0.4%	95	0.5%	-	-	-	-	50	0.4%
Adenocarcinoma (8050,8140-8147, 8160-8162,8180-8221, 8250-8507,8520-8551,8560, 8570-8574,8576,8940-8941)	161,928	94.3%	131,803	94.9%	16,204	92.0%	11,916	93.4%	751	91.5%	13,026	93.3%
Adenocarcinoma, NOS (8140)	111,564	65.0%	90,474	65.2%	11,223	63.7%	8,636	67.7%	568	69.2%	9,050	64.8%
Adenocarcinoma in adenomatous polyp (8210)	12,357	7.2%	9,984	7.2%	1,081	6.1%	1,019	8.0%	56	6.8%	875	6.3%
Adenocarcinoma in villous adenoma (8261)	5,218	3.0%	4,295	3.1%	521	3.0%	335	2.6%	18	2.2%	483	3.5%
Mucinous adenocarcinoma (8470-8473,8480,8482)	12,169	7.1%	10,263	7.4%	1,124	6.4%	676	5.3%	41	5.0%	1,061	7.6%
Mucin-producing adenocarcinoma (8481)	3,223	1.9%	2,606	1.9%	433	2.5%	159	1.2%	-	-	265	1.9%
Signet ring adenocarcinoma (8490)	1,929	1.1%	1,631	1.2%	149	0.8%	134	1.0%	-	-	163	1.2%
Other adenocarcinomas <sup>e</sup>	15,468	9.0%	12,550	9.0%	1,673	9.5%	957	7.5%	52	6.3%	1,129	8.1%
Other specific carcinomas (8012-8015,8030-8046, 8150-8155,8170-8175, 8230-8249,8508,8510-8513, 8561-8562,8575,8580-8671)	6,548	3.8%	4,463	3.2%	1,049	6.0%	673	5.3%	44	5.4%	649	4.6%
Neuroendocrine carcinoid (8240-8245)	5,430	3.2%	3,532	2.5%	944	5.4%	608	4.8%	36	4.4%	560	4.0%
Other <sup>f</sup>	1,118	0.7%	931	0.7%	105	0.6%	65	0.5%	-	-	89	0.6%
Unspecified, Carcinoma, NOS (8010-8011, 8020-8022)	1,562	0.9%	1,251	0.9%	164	0.9%	109	0.9%	-	-	148	1.1%

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey). Percents may not sum to 100 due to rounding.

<sup>a</sup> Excludes Kaposi Sarcoma, mesothelioma, lymphomas, leukemias, myelomas, lymphoreticular, and immunoproliferative diseases.

<sup>b</sup> Estimates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

<sup>c</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

<sup>d</sup> Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

<sup>e</sup> Epidermoid carcinoma includes squamous, basal, and transitional cell carcinomas.

<sup>f</sup> Includes histologies 8050, 8141-8147, 8160-8162, 8180-8204, 8211-8221, 8250-8260, 8262-8264, 8270-8463, 8500-8507, 8514, 8520-8551, 8560, 8570-8574, 8576, 8940-8941.

<sup>f</sup> Includes histologies 8012-8015, 8030-8046, 8150-8155, 8170-8175, 8230-8231, 8246-8249, 8508, 8510-8513, 8561-8562, 8575, 8580-8671.

- Statistic not shown due to fewer than 16 cases during the time period.

Table 6.29 - continued

## Cancer of the Colon And Rectum (Invasive)

Percent Distribution and Counts by Histology among Histologically Confirmed Cases, 2004-2008  
Both Sexes by Race

Histology <sup>a</sup>	<u>All Races</u>		<u>White</u>		<u>Black</u>		<u>Asian/Pacific Islander</u>		<u>American Indian/ Alaska Native<sup>b</sup></u>		<u>Hispanic<sup>c</sup></u>	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Sarcoma and other soft tissue tumors (8680-8713,8800-8921, 8990-8991,9040-9044, 9120-9136,9150-9252, 9370-9373,9540-9582)	99	0.1%	75	0.1%	-	-	-	-	-	-	-	-
Other specific types (8720-8790,8930-8936, 8950-8983,9000-9030, 9060-9110,9260-9365, 9380-9539)	206	0.1%	152	0.1%	26	0.1%	27	0.2%	-	-	21	0.2%
Unspecified (8000-8005)	526	0.3%	442	0.3%	51	0.3%	20	0.2%	-	-	50	0.4%
Total <sup>d</sup>	171,646	100.0%	138,836	100.0%	17,607	100.0%	12,764	100.0%	821	100.0%	13,964	100.0%

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey). Percents may not sum to 100 due to rounding.

<sup>a</sup> Excludes Kaposi Sarcoma, mesothelioma, lymphomas, leukemias, myelomas, lymphoreticular, and immunoproliferative diseases.

<sup>b</sup> Estimates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

<sup>c</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

<sup>d</sup> Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

<sup>e</sup> Total includes carcinoma cases from the previous page.

- Statistic not shown due to fewer than 16 cases during the time period.

# SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates<sup>a</sup> Cancer of the Colon and Rectum, by Race and Sex

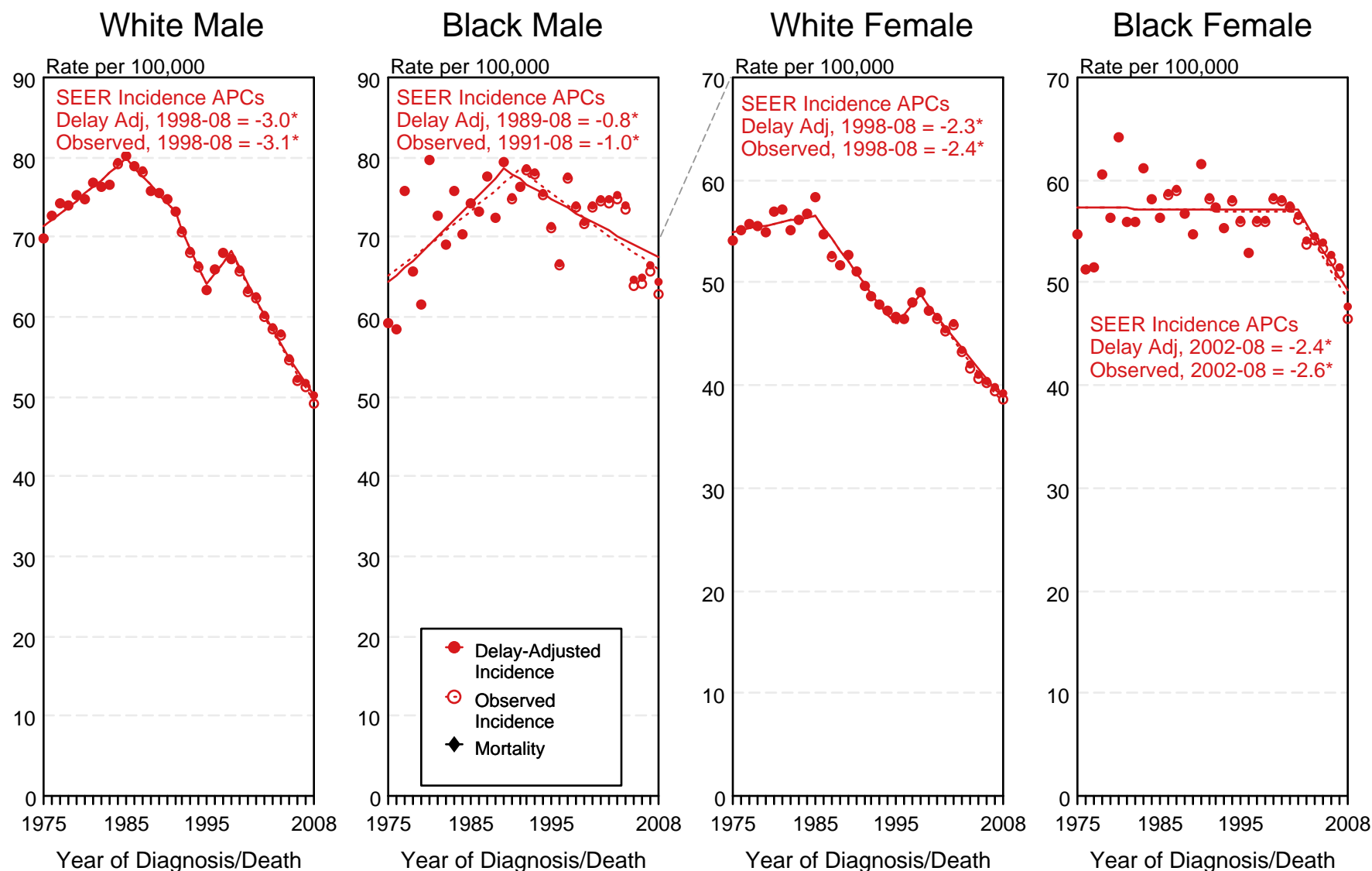


Figure 6.1

<sup>a</sup> Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC). Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

\* The APC is significantly different from zero ( $p < 0.05$ ).

# SEER Incidence and US Death Rates<sup>a</sup> Cancer of the Colon and Rectum, Both Sexes Joinpoint Analyses for Whites and Blacks from 1975-2008 and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2008

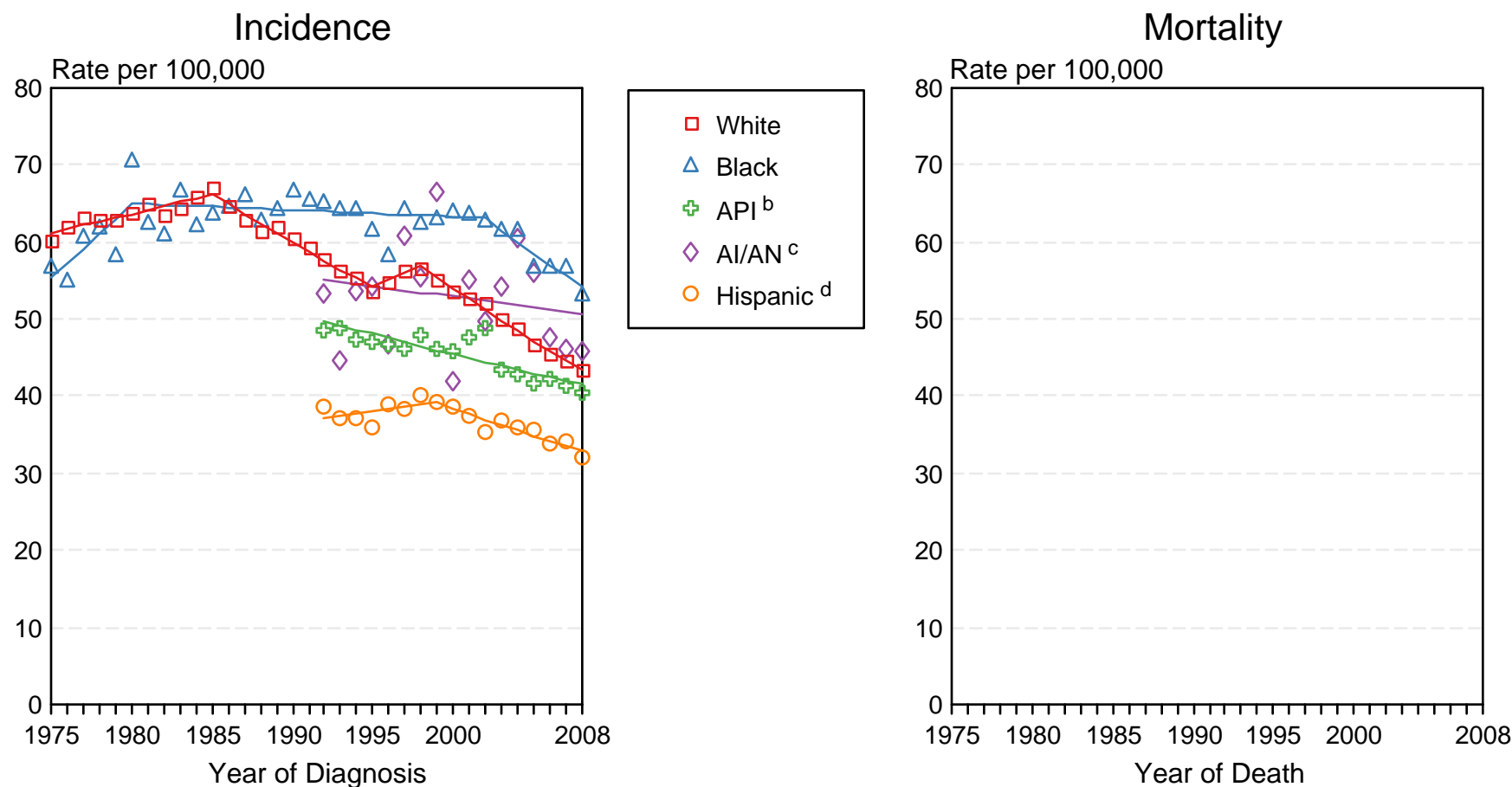


Figure 6.2

Source: Incidence data for whites and blacks are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta). Incidence data for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics are from the SEER 13 Areas (SEER 9 Areas, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Mortality data are from US Mortality Files, National Center for Health Statistics, CDC.

<sup>a</sup> Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2008 period allow a maximum of 5 joinpoints. Analyses for other ethnic groups during the period 1992-2008 allow a maximum of 3 joinpoints.

<sup>b</sup> API = Asian/Pacific Islander.

<sup>c</sup> AI/AN = American Indian/Alaska Native. Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

<sup>d</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. Mortality data for Hispanics exclude cases from Connecticut, the District of Columbia, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma, and Vermont.



# SEER Observed Incidence and SEER Delay Adjusted Incidence Rates<sup>a</sup> SEER 9 Areas Compared to SEER 13 Areas Cancer of the Colon and Rectum, Male, by Race

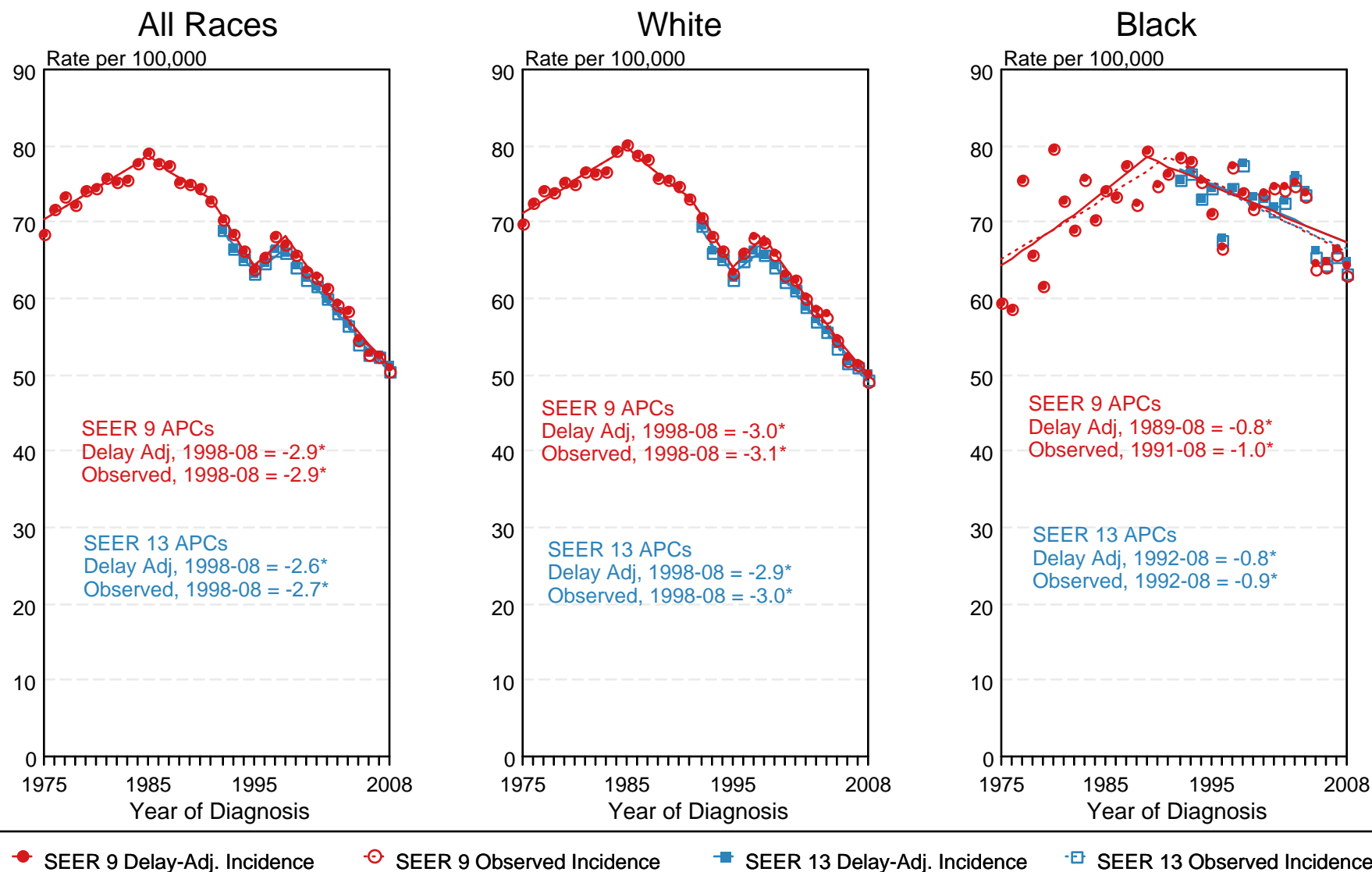


Figure 6.3

<sup>a</sup> Source: SEER 9 areas and SEER 13 areas.  
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).  
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute.  
The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.  
\* The APC is significantly different from zero ( $p < 0.05$ ).

# SEER Observed Incidence and SEER Delay Adjusted Incidence Rates<sup>a</sup> SEER 9 Areas Compared to SEER 13 Areas Cancer of the Colon and Rectum, Female, by Race

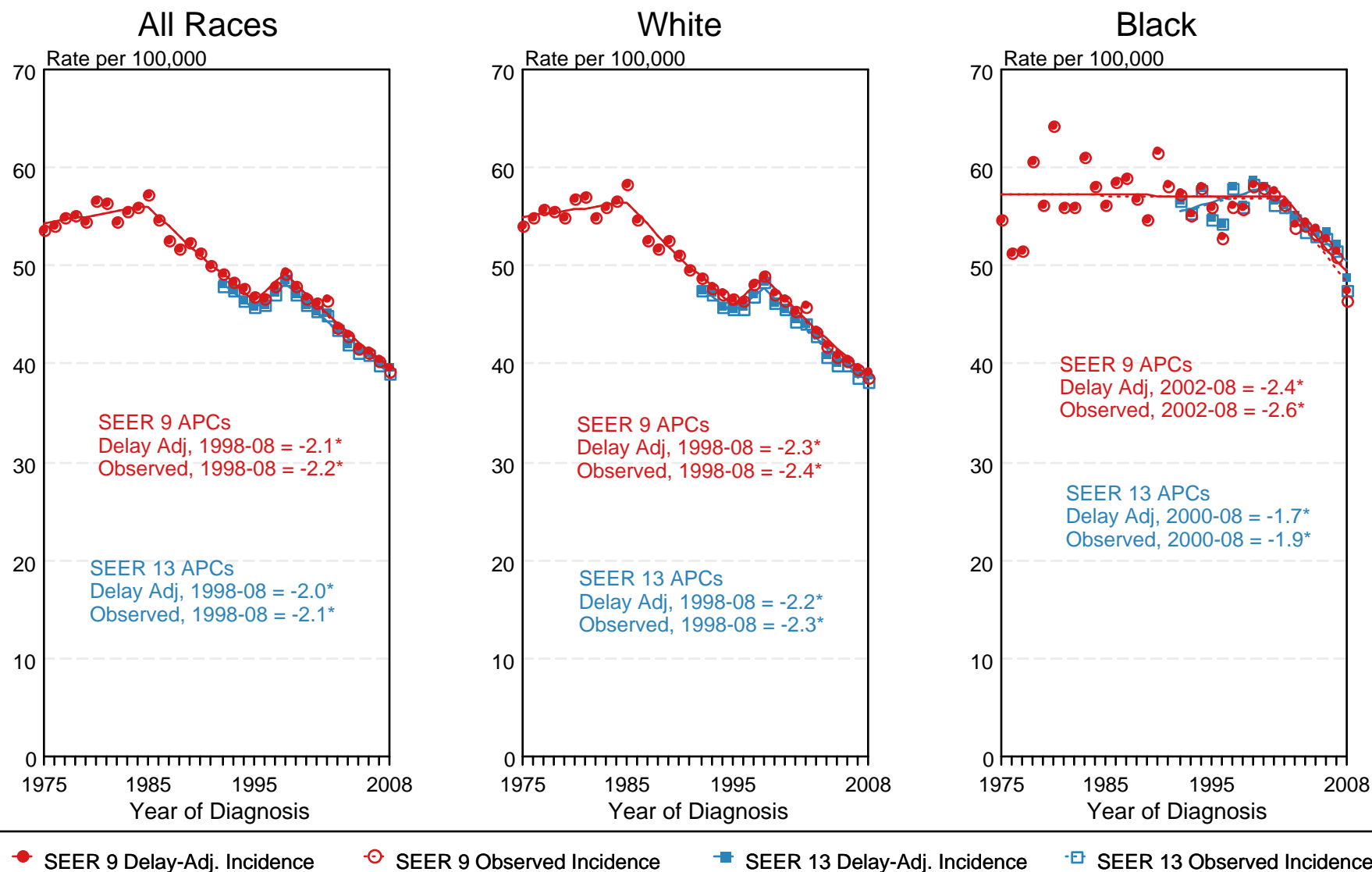
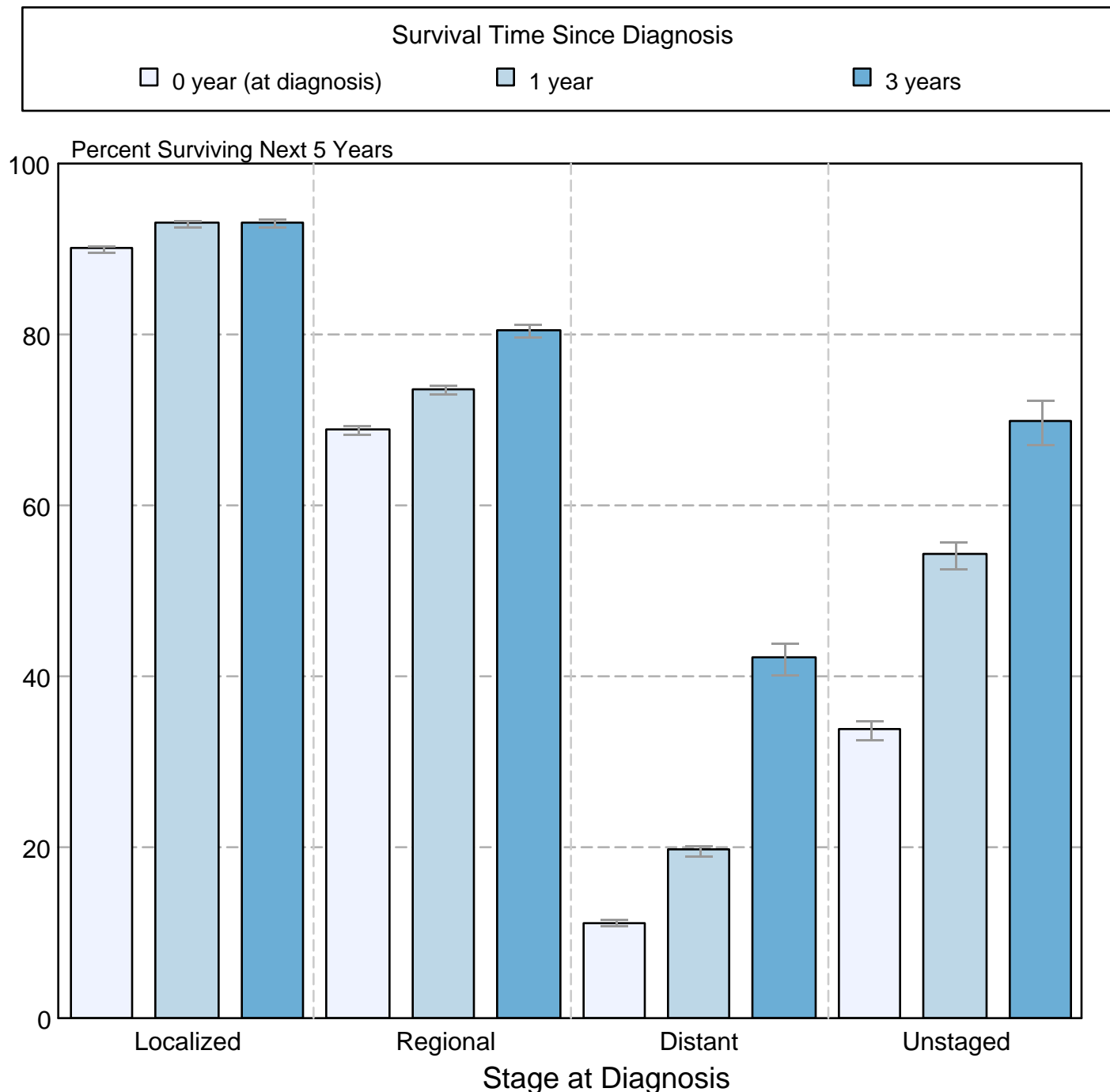


Figure 6.4

<sup>a</sup> Source: SEER 9 areas and SEER 13 areas.  
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).  
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute.  
The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.  
\* The APC is significantly different from zero ( $p < 0.05$ ).

Figure 6.5

**Cancer of the Colon and Rectum**  
**5-Year SEER Conditional Relative Survival and**  
**95% Confidence Intervals**  
 Probability of surviving the next 5 years given the cohort  
 has already survived 0, 1, or 3 years  
 1998-2007 by stage at diagnosis



Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2007. The remaining 13 SEER Areas contribute cases for the entire period 1998-2007.

Percent surviving is not shown if based on less than 25 cases.

Confidence intervals are not shown if length of the confidence interval is greater than 5 times the standard error.